New Hampshire Department of Environmental Services

RESPONSE TO PUBLIC COMMENT AND SUMMARY OF SUBSTANTIVE DIFFERENCES BETWEEN THE DRAFT AND FINAL 2004 SECTION 305(B) AND 303 (D) SURFACE WATER QUALITY REPORT

3/31/04

On February 12, 2004, the New Hampshire Department of Environmental Services (DES) released the draft Section 305(b) and 303(d) Surface Water Quality Report and the Draft 2002 Consolidated Assessment and Listing Methodology (CALM) for public comment. Downloadable copies of the draft assessment and CALM were made available on the DES website for review (www.des.state.nh.us/wmb/swqa/). In addition, the following organizations/agencies were notified by email or postal mail:

Appalachian Mountain Club
Audubon Society
Connecticut River Joint Commissions
Conservation Law Foundation
County Conservation Districts
Lake and River Local Management Advisory Committees
Maine Department of Environmental Protection
Manchester Conservation Commission
Massachusetts Department of Environmental Protection
Merrimack River Watershed Council
National Park Service
New England Interstate Water Pollution Control Commission
NH Department of Health and Human Services
NH Coastal Program
NH Rivers Council
North Country Council
Regional Planning Commissions
Society for the Protection of National Forests
Natural Resources Conservation Service
The Nature Conservancy
Upper Merrimack River Local Advisory Committee
US Environmental Protection Agency
US Geological Survey
US Fish and Wildlife Service
US Forest Service
University of New Hampshire
Vermont Department of Environmental Conservation
Volunteer Lakes Assessment Program
Volunteer Rivers Assessment Program

The public comment period ended on March 15, 2004. The following represents DES's response to public comments received during this period and a summary of substantive differences between the draft and final Section 305(b) and 303(d) Surface Water Quality Report.

A. RESPONSE TO PUBLIC COMMENT

Comment # 1: We (the Connecticut River Joint Commissions) are greatly concerned that the entire Connecticut River mainstem below Pittsburg appears on the 303(d) list due to the suspected presence of PCBs. The Connecticut River is the only water body in New Hampshire besides Great Bay to be listed for this contaminant. A TMDL is scheduled for 13 years from now, in 2017. This listing is based on a very small sample size of fish taken from the southern portion of our region sixteen years ago, in 1988. Our river has become a recreation asset once again, and fishing on the Connecticut River is more popular than ever, especially since it is embraced by the Connecticut River Byway. Since 1997, substantial research has been done by EPA and DES on sediment quality, but the results of a 2000 study aimed at looking at fish tissue toxins, including PCBs, still have not been released. We respectfully request that, since this testing has already been done, citizens of the Connecticut River Valley should not have to wait until 2017 for this matter to be laid to rest. We and our local river subcommittee members await release of the fish tissue toxin study results with great interest, and hope that DES will join us in requesting this information at the soonest possible time.

DES RESPONSE: In New Hampshire, fish consumption advisories are issued by the Department of Health and Human Services (DHHS). The decision to issue a fish consumption advisory for a particular surface water or waters is based on the results of quantitative risk assessments conducted by DHHS to estimate the potential risk to humans from eating fish from the surface water(s). Concentrations of pollutants found in fish tissue, among other parameters, are factored into the risk assessment.

Since 1998, the Connecticut River has been listed on the State's 303(d) list as impaired for fish consumption due to fish consumption advisories issued by the DHHS for polychlorinated biphenyls (PCBs), as well as mercury. The mercury fish consumption advisory applies to all surface waters in the State and is based on a review of over 1,200 freshwater fish samples from 150 waterbodies throughout the state. The PCB fish consumption advisory for the Connecticut River is based on limited sampling conducted in 1986 and 1987. The advisory for mercury recommends limitations on the amount of fish consumed each month by various sectors of the population (i.e., pregnant and nursing women, children, etc.) whereas the PCB advisory recommends trimming off the fatty areas and cooking the fish such that juices, which may contain fat where PCBs are most likely to concentrate, will drip off. Consequently the fish consumption advisory for mercury is more restrictive than the PCB advisory.

In 2000, New Hampshire, Vermont, Massachusetts and Connecticut cooperated in a regional fish sampling effort coordinated by the New England Interstate Water Pollution Control Commission along the Connecticut River. Selected resident fish were collected from various sites along the Connecticut River and analyzed for mercury, PCBs and other organic contaminants. One of the main objectives of this study was to use the fish tissue samples collected in 2000 to determine if the existing fish consumption advisories should be revised or rescinded.

DES appreciates the concerns of the Connecticut River Joint Commissions regarding the slow progress of the regional study and has made several inquiries in the past to find out the status of the data. It is our understanding that results have not yet been released because of quality assurance/quality concerns with some of the data. Over the last two years, EPA has devoted a considerable amount of time reviewing (i.e., validating) the data to ensure it is of the highest possible quality given that it will be used to make human health related decisions. DES has recently learned, and is pleased to announce, that EPA is very close to completing their review and expects to produce a draft report for review in the

summer of 2004. Once a final report is prepared, and assuming there is sufficient valid data, the next step will be to work with the DHHS to conduct a health risk assessment using the 2000 data to determine if the PCB and other fish consumption advisories should be revised or rescinded. Once completed, the Connecticut River will be reassessed for the designated use of fish consumption.

COMMENT #2: We (the Connecticut River Joint Commissions) note that while the impoundment behind the Bellows Falls Dam is given a hydrologic unit code of "NHIMP" and grouped with other impoundments, similar impoundments upstream are treated as lakes and given a hydrologic unit code of "NHLAK", including Moore Reservoir (NHLAK801030202-01) and Wilder "lake" (NHLAK801040402-03). We also note that Second Connecticut Lake (NHLAK801010101-01) and Third Connecticut Lake (NHLAK801010101-02), which are natural lakes although a dam has raised the water level of the former, do not appear at all in the draft assessment, although they are covered in the 2002 list. These are minor points, and we do believe that the department's effort in introducing hydrologic unit codes has been a useful one.

DES RESPONSE: The difference between lakes and impoundments is admittedly not always clear as most surface waters typically called lakes, have dams. At DES, the Watershed Management Bureau Biology Section has historically monitored and assessed "lakes", of which there are a few some might consider more of an impoundment than a lake. For the 2002 and 2004 assessments, and to be consistent with previous assessments, it was decided to call a waterbody a lake (i.e., NHLAK) if it has been historically assessed by the Biology Section. Most are typically thought of as lake and include the word "lake" in their name, but a few, like Moore Reservoir, do not. Nevertheless they were assigned a lake Assessment Unit ID (ie, NHLAK) for reasons mentioned above. Once the "lakes" were identified, all other waterbodies immediately upstream of dams were, by default, considered impoundments (NHIMP).

It is important to note that whether a surface water is called a lake or an impoundment does not significantly impact how it is assessed; this is especially true for the larger impoundments. We recognize, however, that the current method for distinguishing between lakes and impoundments may make it a little difficult, in some cases, to find assessment results. For this reason, DES has provided an Excel spreadsheet and several lists on our website (http://www.des.state.nh.us/WMB/swqa/2004/default.asp?go=aboutAUs) to allow the public to search for Assessment Unit IDs by the waterbody name. Knowing the AUID, one can then easily find the assessment results in the lists provided which are sorted by AUID. In the near future we will be revisiting our waterbody identification system when we move from 1:100,000 scale to a higher resolution hydrography (1:24,000 scale). At that time it's very likely we will have a more technical definition for lakes and impoundments.

With regards to the Second and Third Connecticut Lakes, assessment results for each may be found on page 285 in Volume 2 (see http://www.des.state.nh.us/WMB/swqa/2004/pdf/Vol2/Lakes.pdf).

B. SUMMARY OF SUBSTANTIVE DIFFERENCES BETWEEN THE DRAFT AND FINAL2004 SECTION 305(B) AND 303(D) SURFACE WATER QUALITY REPORT

TABLE 1: SUBSTANTIVE CHANGES MADE TO ASSESSMENT UNITS (AUs) (These changes are reflected in the lists provided in Volumes 2 and 3)	
Assessment Unit ID and Waterbody Name	**Comment**
NHIMP600020104-01 Wildcat Brook and NHRIV600020104-01 (Bog Brook-Wildcat Brook)	Draft report incorrectly assigned Stations 04-WLD and 06-WLD (and their associated data) to NHIMP600020104-01 instead of NHRIV600020104-01 (Bog Brook-Wildcat Brook). As a result the following changes were made to each of these AUs: NHIMP600020104-01: Primary Contact Recreation (PCR) and Secondary Contact Recreation (SCR) were fully supporting (FS) and were changed to Not Assessed (NA). Aquatic Life Use Support (ALUS) was changed from Insufficient Information (II) to NA. NHRIV600020104-01: PCR and SCR were changed from NA to FS. ALUS was changed from NA to II.
NHIMP600030402-01 Jones Brook Impoundment	Draft report did not indicate a trophic status for this assessment unit (AU) while there is data that indicated oligotrophic. This was corrected to trophic status of oligotrophic.
NHIMP802010401-03 Ashuelot River	Draft report incorrectly called this waterbody an impoundment instead of a river. In July of 2002, the Winchester Town dam (#255.10) was removed. Consequently this AU was deleted in the final report and this section of river was added to NHRIV802010401-19.
NHLAK700020110-02-36 Middle Brook Canal-Lake Winnepesaukee	Impairment cause of “Sedimentation and Erosion” changed from Impairment category 4B to 5 and assigned estimated TMDL date of 2017.
NHLAK700020201-02 Hunkins Pond	Impairment cause of “Chlorophyll a” changed from Impairment category 4B to 5 and assigned estimated TMDL date of 2017.
NHLAK700060703-02-01 Crystal Lake	Impairment cause of “Sedimentation and Erosion” changed from Impairment category 4B to 5 with estimated TMDL date of 2017.
NHLAK700060703-02-02 Crystal Lake – Town Beach	Impairment cause of “Sedimentation and Erosion” changed from Impairment category 4B to 5 with estimated TMDL date of 2017.
NHLAK700061203-02-04 Beaver Lake	Draft report incorrectly listed this AU as being impaired for Aquatic Life Use Support due to mercury. There is no data to support this. Consequently, mercury was removed as an impairment for ALUS in the final report.
NHIMP700010801-08 Pemigewasset River-Ayers Island Dam Pond	Consistent with 2002 cycle, changed cause of impairment “dissolved oxygen” from impairment category 5 to 4C.
NHRIV600030608-14 Unnamed Trib to Cocheco River, (Dover –from landfill)	Changed cause of impairment “iron, from impairment category 4B to 5 and assigned estimated TMDL date of 2017.

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Assessment Unit ID and Waterbody Name	**Comment**
NHRIV600030806-14 Tributary to Squamscott River – Stuart Dairy Farm	Changed cause of impairment "Escherichia coli" from impairment category 4B to 5 and assigned estimated TMDL date of 2017.
NHRIV802010301-12 Mill Creek	Changed cause of impairment "Benzo(a)pyrene (PAHs) from impairment category 4B to 5 and assigned estimated TMDL date of 2017.
NHRIV600020105-06 Ellis River and NHRIV600020105-08 Meserve Brook	Draft report incorrectly assigned AUID NHRIV600020105-06 to two spatially disconnected segments. This was corrected in the final report by maintaining NHRIV600020105-06 and assigning a new AUID (NHRIV600020105-08) to the other segment.
NHRIV600030608-13 Unnamed Trib to the Cocheco River	Draft report incorrectly listed the use of Secondary Contact Recreation (SCR) as not assessed even though the Primary Contact Recreation (PCR) use is fully supporting based on bacteria measurements. In accordance with the Consolidated Assessment and Listing Methodology (CALM), bacteria thresholds for determining impairment for SCR are less stringent than for PCR. Consequently, if PCR is fully supporting based on bacteria, then SCR is fully supporting (as long as there are no other impairments). In the final report, the use support status for SCR was changed from insufficient information to fully supporting.
NHRIV600031004-04 Little River	For Aquatic Life Use Support, "benthic macroinvertebrates-bioassessments (streams)" was removed as an impairment. This was based on further investigation of the site which indicated that it did not represent a stream type for which the Benthic Index of Biological Indicators (IBI) should be applied.
NHRIV700060502-13 Little Suncook River	For Aquatic Life Use Support, "benthic macroinvertebrates-bioassessments (streams)" was removed as an impairment. This was based on further review of the methodology used to collect the sample which revealed that it does not conform with the protocols used to develop the Benthic Index of Biological Indicators (IBI).
NHRIV700060607-20 Catamount Brook	Draft report incorrectly showed this AU as not assessed for Primary Contact Recreation (PCR) and Aquatic Life Use Support (ALUS). In the final report these uses were revised to indicate impairment of PCR based on E. coli, foam,/flocs and scum and for ALUS, excess algal growth and iron. Sources of impairment were listed as Unpermitted Discharge (Domestic Wastes), and Unpermitted Discharge (Industrial/Commercial Wastes). In addition the size of this AU was increased by 0.539 miles to include the actual zone of impairment.
NHRIV700060905-12 McQuade Brook	Aquatic Life Use Support was changed from Not Assessed to Not Supporting due to chlorides. The source of impairment was listed as unknown.
NHRIV700061205-01 Beaver Brook- Tony's Brook	Draft report incorrectly assigned a Use Support status of Insufficient Information for Aquatic Life. This was corrected to Not Support due to Benthic Macroinvertebrates.
NHRIV801060106-03 Hardy Hill Brook	Draft report incorrectly assigned a Use Support status of Insufficient Information for Aquatic Life. This was corrected to Not Support due to Aluminum.

TABLE 1: SUBSTANTIVE CHANGES MADE TO ASSESSMENT UNITS (AUs) (These changes are reflected in the lists provided in Volumes 2 and 3)	
Assessment Unit ID and Waterbody Name	**Comment**
NHRIV802010401-15 Ashuelot River	Draft report indicated this assessment unit (AU) was threatened for Aquatic Life Use Support (ALUS) based on the Keene Wastewater Treatment Facility being in Significant Noncompliance (SNC) of their NPDES permit effluent limit for zinc. Subsequent research has revealed that Keene has reduced levels of zinc in their influent such that they are no longer in SNC of their permit for zinc. This was accomplished by reducing zinc levels in their influent. Consequently zinc was removed as an impairment for ALUS for this AU.

TABLE 2: SUBSTANTIVE CHANGES MADE TO VOLUME 1-ASSESSMENT SUMMARIES
Section 2.1, Table 2-1: Revised the total river miles, the acreage of lakes, acres of impoundments and acres of significantly publicly owned lakes to be consistent with the Assessment Database.
Section 3.1, Tables 3-1, 3-2 and Figure 3-1: Revised to reflect updated sizes for impoundments, lakes and ponds, and rivers and streams and associated changes to AUs presented above.
Section 3.3, Tables 3-6, 3-7 and 3-8: The individual use support, cause and source of impairment tables for impoundments were revised to reflect the changes in AUs noted above.
Section 3.4, Tables 3-9, 3-10, 3-11, and 3-12: The individual use support, cause and source of impairment and trophic status tables for lakes and ponds were revised to reflect the changes in AUs noted above.
Section 3.6, Tables 3-16, 3-17 and 3-18: The individual use support, cause and source of impairment tables for rivers and streams were revised to reflect the changes in AUs noted above.
Section 3.7: Moved existing section 3.7 to section 3.8. Added Wetlands Assessment to Section 3.7.
Section 3.8. This was previously section 3.7. The first paragraph was revised to indicate that probabilistic assessments in estuaries were conducted for aquatic life, primary contact recreation and secondary contact recreation uses. The draft report incorrectly indicated that probabilistic assessments were only done for the aquatic life use.

TABLE 3: SUBSTANTIVE CHANGES MADE TO VOLUME 1- CONSOLIDATED ASSESSMENT AND LISTING METHODOLGY (CALM)
Section 3.1.1, Table 3-1: The total size and number of assessment units (AUs) were revised to be consistent with the changes to the AUs noted above.
Section 3.2.4: The draft report incorrectly listed the core indicators for rivers and streams and associated impoundments of 4th order or less as “biological based on at least 2 assemblages (fish and benthic macroinvertebrates)”. This was corrected in the final report to read “biological based on benthic macroinvertebrates”.

TABLE 4: ADDITION OF VOLUME 4 – ADDITIONAL SECTION 305(B0 REQUIRMENTS
Volume 4 was added which includes a discussion on the social and economic impacts of clean water and information on the nonpoint source control program in New Hampshire.